

REMARKS

In the Final Office Action, the Examiner rejected claims 1, 7-10, 15-17, 20, 21, 23, 24, 27 and 29-39 and objected to claims 13, 14, 18, 19, 25, and 26. By the present response, claims 1, 7, 8, 17, 23, 29, 30 are amended and claims 15, 20, 27, 36, and 37 are canceled. Upon entry of these amendments, claims 1, 7-10, 13, 14, 16-19, 21, 23-26, 29-35, 38, and 39 will be pending in the present patent application. Reconsideration and allowance of all pending claims are requested.

Claim Objections

Claims 1, 29 and 30 have been amended to replace the term “may” with the phrase “is configured to,” as suggested by the Examiner. In view of the Examiner’s stated rationale for this objection, these amendments are not believed to narrow the scope of the claims so amended. In particular, the Examiner’s assertion that a detector that is “‘configured to generate’ would result in a claim that would be capable of acquiring a signal” appears to be equally true of a detector that “may” generate such a signal, i.e., a detector that may generate such a signal must be capable of doing so. Therefore, the Applicants believe that the Examiner’s preference as to claim language is not narrowing in scope. In view of the non-narrowing nature of these amendments, the Applicants have amended the claims as suggested in order to advance prosecution of the present claims.

In addition, the Applicants have amended claim 1 to clarify that the radiation is emitted by the emission points of the recited X-ray source. In view of this amendment, the Examiner’s objection as to antecedent basis is believed to be addressed. Likewise, Applicants have amended claims 7 and 8 to clarify that the distribution of emission points with respect to the X-ray source in these claims is along a longitudinal axis. These amendments will presumably clarify for the Examiner that, if more than one longitudinal axis were to be present for an X-ray source, the distribution of emission would be along at least one of these longitudinal axes.

Claims 9, 13, 14, 18, 19, 23, 25, and 26 are not amended in view of the Examiner's objection. One of ordinary skill in the art would appreciate that a "view" and a "set of views," as used in the context of these claims is distinct from a "field of view." In particular, a "view" as used in the claims is merely an alternative way to refer to a "view angle" as used throughout the application. As the Applicants do not believe that one of ordinary skill in the art would be confused as to the use of the term "view" or "set of views" as used in conjunction with the present detailed description, no amendment or clarification is believed to be necessary at this time.

Rejections Under 35 U.S.C. § 102

The Examiner rejected claims 1, 7-10, 16, 17, 21, 23, 24, 29, 30, and 39 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,421,412 (the "Hsieh reference"). In addition, the Examiner rejected claims 1, 32 and 38 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,335,255 (the "Seppi reference"). Applicants respectfully traverse these rejections.

With regard to independent claim 1, the Applicants have amended this claim to recite that the two or more emission points of the X-ray source are controlled such that the flux of the radiation emitted by the respective emission points is determined based on at least one of the respective view relative to the field of view or a path length through a patient at the respective view. This subject matter generally corresponds to the subject matter of canceled claim 15 and was recognized by the Examiner as not being present in either the Hsieh or Seppi references. To the extent that the subject matter does not correspond to that of canceled claim 15, support can be found in the application at page 20, lines 1-11.

In view of the present amendment, the rejection of claim 1 will be discussed below in view of the rejection of claim 15 based on the Hsieh reference and U.S. Patent No. 6,674,837 (the "Taskar reference").

Further, independent claims 17, 23, 29, and 30 are amended to include subject matter similar in scope or concept to that of claim 1 as amended. In particular, independent claim 17 has been amended to include the subject matter of claim 20 (the Applicants respectfully note that the subject matter of claim 20 does not appear to have been addressed by the Examiner in the present office action. In order to advance prosecution, the Applicants have chosen to argue claim 20 with claim 15), independent claim 23 has been amended to include the subject matter of claim 27 (likewise, absent a specific rejection, the Applicants have chosen to argue claim 27 with claim 15), independent claim 29 has been amended to include the subject matter of claims 15 and 36, and independent claim 30 has been amended to include the subject matter of claim 37. In view of these amendments, the listed independent claims are argued below in the discussion of the combination of the Hsieh and Taskar references.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 15, 31, and 33-37 under 35 U.S.C. § 103(a) as being unpatentable over the Hsieh reference in view of Taskar, U.S. Patent No. 6,674,837 (the "Taskar reference"). The Applicants respectfully traverse these rejections.

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner

must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

With regard to claim 1, the Applicants respectfully disagree that the subject matter of claim 1, as amended, is disclosed by the Hsieh and Taskar references. In particular, independent claim 1, as amended, recites that “the flux of the radiation emitted by the respective emission points is determined based on at least one of the respective view relative to the field of view or a path length through a patient at the respective view.” Independent claims 17 and 23, as amended, recite similar subject matter. The portion of the Taskar reference to which the Examiner cites as disclosing the subject matter of determining flux based on a respective view (col. 6, lines 3-5) is entirely silent as to this subject matter. Likewise, the remainder of the Taskar reference appears to be silent as to determining X-ray flux based on view or on the path length through a patient, as presently recited. Indeed, as the Taskar reference does not appear to disclose the rotation of a source about a field of view, it is unclear why Taskar would be believed to disclose such subject matter. Further, the Hsieh reference is not believed to disclose determining flux based on either view or path length through a patient. In view of these deficiencies of the cited combination of references, no *prima facie* case of obviousness is believed to exist with regard to independent claims 1, 17, and 23, as amended.

Furthermore, independent claims 1, 29, and 30 recite that each detector element is configured to generate one or more signals in response to radiation emitted by the two or more emission points or in response to the emitted X-rays. The Taskar reference does not disclose this and, indeed, if the teachings of the Taskar reference upon which the Examiner relies were modified in this manner, the Taskar reference would be unsatisfactory for its intended purpose. In particular, the Taskar reference is generally directed to synchronized emission and detection resulting in scatter rejection. Taskar, col. 2, lines 29-30. As described in the Taskar reference under the heading “The Active-Synchronized Imaging System,” a synchronization circuit 78 permits corresponding pixels of the X-ray source 20 and sensor 72 to operate synchronously without the other pixels being active. Taskar, col. 5, lines 29-33. Therefore, only the pixel 88 of sensor 72 that corresponds to the primary beam 90 is activated. Taskar, col. 5, lines 40-42. In this way, scattered beams are not detected on the sensor 72 because the pixels on which the scattered beams impinge are not activated. Taskar, col. 5, lines 42-44. Indeed, as the Taskar reference states: “[a]s the X-ray generating pixels of X-ray source 20 are operated in a scanned manner synchronously with the corresponding pixels of sensor 72 an X-ray image of object 86 will be generated without being effected by beam scattering[.]” Taskar, col. 5, lines 44-48. As the Taskar reference states, this synchronization of emission and detection is a “key element of the present invention.” Taskar, col. 5, lines 49-50.

Therefore, the Taskar reference does not teach that each detector element is configured to generate one or more signals in response to emitted radiation or X-rays. Instead, the Taskar reference clearly and specifically teaches that only those detector pixels corresponding to an active source pixel generate such a signal in response to emitted radiation or X-rays. Taskar, col. 5, lines 25-60. As a result, Taskar reference cannot be modified by the teachings of Hsieh (or Hsieh by Taskar) to disclose the recited subject matter without also making the Taskar reference unsuitable for its intended purpose, i.e., scatter reduction. Taskar, col. 5, lines 49-54. Indeed, the teachings of the

Taskar reference upon which the Examiner relies as disclosing aspects of the present claims are based upon the teachings of Taskar related to synchronous operation of a pixilated source and detector. The Examiner cannot rely on these teachings of Taskar and simultaneously denigrate or modify the system of the Taskar reference such that those teachings would not be achieved. *See* M.P.E.P. § 2143.01, Section V. Therefore, the Taskar and Hsieh references cannot be combined as proposed by the Examiner to disclose the recited features of independent claims 1, 29, and 30.

In view of these deficiencies of the Taskar and Hsieh references with regard to independent claims 1, 17, 23, 29, and 30, as amended, no *prima facie* case of obviousness is believed to exist for these claims. Therefore, independent claims 1, 17, 23, 29, and 30, and those claims depending from these independent claims, are believed to be allowable in their present form. Reconsideration and allowance of these claims is, therefore, respectfully requested.

Conclusion

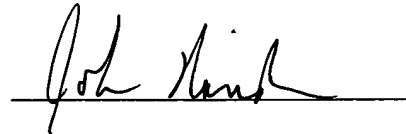
In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. Furthermore, if the Examiner believes a discussion of the present response or amendments will advance prosecution of the present claims, the Examiner is encouraged to contact the undersigned at the telephone number listed below.

General Authorization for Extension of Time

In accordance with 37 C.F.R. § 1.136, Applicants hereby provide a general authorization to treat this and any future reply requiring an extension of time as incorporating a request thereof. The Commissioner is authorized to charge the requisite fee associated with any such extension to the Deposit Account No. provided above.

Respectfully submitted,

Date: August 14, 2006

A handwritten signature in black ink, appearing to read "John Rariden", is written over a horizontal line.

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